IBM Consulting

G-Cloud 15
IBM – Application Development and Integration on Red Hat OpenShift (OCP)

Service Definition Document

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Service Overview

Features

- Certified, secure, and market-leading technology stack built on open standards for enterprise-grade reliability.
- Agile-driven rapid ideation and outcome-focused delivery for accelerated innovation.
- End-to-end application lifecycle support with a holistic Advise–Move–Build–Manage approach.
- Predefined reference architectures and design patterns optimized for hyperscaler and hybrid cloud environments.
- Integration of IBM Red Hat capabilities with accelerators, toolkits, and cloud-native services for multi-cloud success.
- Comprehensive Site Reliability Engineering (SRE), DevSecOps, and automated application testing for robust operations.
- Simplified solutioning guidance for faster client response and reduced complexity.
- Dynamic Delivery model enabling workforce resilience with anytime, anywhere execution.
- OpenShift Kubernetes automation for “develop once, deploy many” scalability across environments.

Benefits

- Accelerate innovation by enabling new business models and digital transformation through co-creation and speed.
- Access IBM Garage Method for Cloud Toolkit and pre-built reference architectures for faster solution design.
- Leverage a wide range of solution patterns to simplify and accelerate product development and release cycles.
- Enhance enterprise agility with up to 40–60% faster time-to-market and improved user experience.
- Reduce operational IT portfolio costs by up to 30%.
- Unlock up to 20% new revenue opportunities while improving customer service experience.
- Achieve cost optimization with 20–40% reduction in total cost of ownership (TCO).
- Transform operating models through IBM’s Virtual First approach and Anytime Anywhere Delivery framework.
- Drive value in core business functions through faster ecosystem and partner integration.

Key differentiatiors

- Proven expertise in delivering resilient, secure, and compliant solutions, backed by hundreds of successful cloud engagements.
- IBM Garage-led co-creation for rapid development of new business capabilities.
- Dynamic delivery model with real-time innovation micro-centers and access to global virtual talent pools for portable, rapid cloud-native application development.
- Collaborative co-creation approach that empowers IT and developers to innovate, embed best practices, build cloud skills, and scale Agile development.

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- Comprehensive transformation assets, reference implementations, and automation accelerators to simplify and speed up development.
- End-to-end DevSecOps adoption through GBS DevOps accelerators, Red Hat automation, and IBM security capabilities.
- Red Hat-powered assets and expertise enabling true “build once, deploy anywhere” flexibility.
- Industry-leading hybrid multi-cloud expertise underpinned by IBM’s domain knowledge, Red Hat capabilities, and Journey to Cloud services.

Addressing Business Needs

We partner with you to build digital capabilities at scale with speed and agility, leveraging our deep industry and technical expertise, proven tools, and methodologies. Our approach delivers cloud-native applications and digital-ready solutions with a focus on affordability.

IBM’s Application Development and Integration services accelerate the creation of a future-ready business, optimizing costs and reducing technical debt.

IBM provides the skills, methods, and tooling to de-risk complexity through the IBM Garage, which uses an outcome-driven approach to quickly identify key enterprise challenges and engages experts from across the IBM ecosystem to co-create solutions that deliver business value.

Our approach aligns IT with business requirements, reduces operating costs to free up capital for innovation, and enhances the overall application security posture.

How do we manage the Application development to Cloud?

Many clients struggle with a lack of deep application knowledge, capabilities, and tools, which impacts their ability to successfully execute an application development plan.

We provide prescriptive guidance to design and develop applications aligned with hyperscalers and other cloud platforms (AWS, Azure, GCP, IBM Cloud, Red Hat, etc.) through pre-built architecture patterns supported by delivery and estimation models.

Our IBM Garage Method for Cloud and advanced tooling—including automated microservice candidate recommendations and creation—help accelerate time-to-value while maintaining affordability.

IBM enables the journey from legacy to cloud using a range of AI-powered and market-leading application modernization tools such as ADDI, CAST, DevOps Commander, Pathfinder, and more. These tools evaluate the application codebase and validate IT and business requirements to co-create the most suitable strategy.

We address cloud-related security and regulatory compliance complexities by enhancing security posture based on industry-leading practices, regulations, and standards.

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Clients often face challenges with scalability, as the complexity of their application landscape prevents seamless integration of old and new systems. IBM provides the necessary skills and introduces new ways of working through co-creation, co-execution, and close collaboration with client teams. Our modernization approach efficiently transforms applications and data to enable customer-centric innovation and deliver exceptional client experiences.

Service Definition

IBM Application development and integration to Public Cloud and Containers with Red Hat

We provide a full application development service that drives value from your journey to the cloud.

IBM Cloud development and Modernisation

An in-depth analysis of applications at the code level identifies dependencies and the level of remediation required. The results of this analysis, combined with new business requirements, are used to design the modernized application. This is followed by code conversion, containerization, remediation, and new development.

Using data from the discovery process, IBM Design Thinking workshops with IT and business teams help identify opportunities for enhancement to meet evolving IT and business needs and define detailed execution plans.

Development of applications on modern cloud platforms includes:

- Building applications to run on current, supported operating systems, middleware, and databases.
- Deploying applications to the target cloud on OpenShift using deployment patterns optimized for performance.

Each application is adapted for the new platform. An efficient factory approach accelerates execution using the IBM Garage Method for Cloud and associated automation toolsets.

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IBM Approach

We bring the advantage of working with some of the world's largest organizations, transforming complex and critical services in a cloud-agnostic manner. Our approach is built on robust methods, proven processes, and personalized engagement.

We prioritize your business needs and focus on building trusted, long-term relationships, backed by industry-leading experience and capabilities. Our goal is to ensure you gain maximum value from every engagement and achieve outcomes that truly matter for your organization.

Our extensive experience across multiple public clouds, combined with deep expertise in Red Hat and OpenShift, enables a cloud-agnostic approach for all your transformation needs—now and in the future.

We have industrialized a common approach, the IBM Garage Method for Cloud, built on Agile and DevOps principles. This methodology helps build and modernize workloads securely and efficiently, leveraging automation to accelerate delivery and reduce risk. Our approach includes:

- Advise – End-to-end consulting, design, road mapping, and architectural services to navigate the complexity of your multi-cloud journey.
- Move – Accelerated execution using configurable, automated migration tools for multiple cloud platforms, plus capabilities to retire legacy applications and infrastructure.
- Build – High-speed application and platform engineering to create new capabilities or transform existing portfolios for multi- and hybrid-cloud environments at scale.
- Manage – Multi/hybrid cloud DevOps and business service operations delivered through advanced cloud platform architecture and engineering services.
- Development Squads – Scalable teams driving end-to-end development using consistent methods.
- Intelligent AI and Automation – Making your data, applications, and workflows work seamlessly across environments.

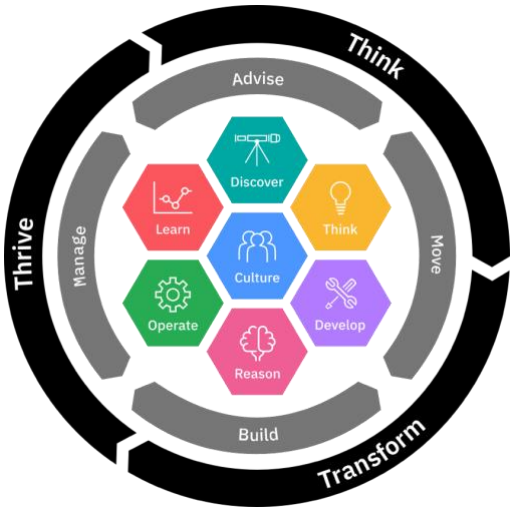

Figure 1: Our Garage Methodology

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Why IBM?

Experience
Extensive track record of delivering major multi-cloud transformations for Fortune 500 companies across AWS, Azure, IBM Cloud (formerly Bluemix), Google Cloud, and private clouds built on Red Hat OpenShift.

Complexity
Proven capability to develop applications from scratch and execute large-scale migrations involving thousands of applications.

Expertise
Global network of cloud consultants and specialists with deep experience in IBM Cloud, Red Hat OpenShift, AWS, Azure, Google Cloud, and more.

Our Delivery Principles
We operate on a set of principles that guide how we think and act in delivering value to our clients:

- Building long-term relationships founded on innovation, trust, and service excellence.
- Applying Design Thinking and Agile practices to shape and execute change programs effectively.
- Embedding cognitive and emerging technologies into enterprise processes for smarter operations.
- Leveraging hybrid multi-cloud solutions to support evolving business needs.
- Developing and deploying world-class talent to deliver exceptional outcomes.
- Using consistent, modern methods and tools, continuously refining them to accelerate value delivery.
- Thriving in globally dispersed, multi-disciplinary engagements, enabled by advanced collaboration tools.
- Implementing robust governance and security measures to ensure business and IT operations remain secure and compliant throughout the transformation journey.
- IBM Cloud® Paks provide AI-powered software designed to accelerate application modernization with pre-integrated data, automation, and security capabilities.

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Garage Method for Cloud

The IBM Garage Method for Cloud is a curated set of practices and workflows designed to help organizations rapidly design, build, deploy, and scale innovative solutions. It combines Enterprise Design Thinking, Lean Startup, and Agile DevOps principles to enable continuous design, delivery, and validation of new functionality.

Containerization

Containerization delivers agility, scalability, and portability of workloads, driving speed and efficiency in cloud transformation.

This innovation has delivered measurable benefits during a cloud migration for a leading UK bank:

- Reduced remediation effort for application layer components, cutting end-to-end migration timelines by up to 35%.
- Rapid application infrastructure scalability, adding containers with minimal effort by replicating application images across new VMs.
- Portability across environments and cloud providers, minimizing future remediation for infrastructure and framework currency—resulting in faster upgrades and lower costs when changing providers.

Garage Method for Cloud Toolkit

The IBM Garage Method for Cloud Toolkit is a suite of integrated tools and assets built on a scalable, flexible architecture, supported by an analytics engine and automation. It helps clients accelerate their transformation journey to a multi-cloud environment.

This toolkit enables faster cloud adoption through automation for greater efficiency and provides deeper analytical insights for improved decision-making. Key benefits include:

- Up to 40% reduction in time and effort to process new sources of information.
- Up to 25% reduction in errors from manual migration activities.
- Up to 25% reduction in time and effort required for migration tasks.

Development and Migration Factories

Our Application Development and Migration Factories act as a comprehensive design and delivery engine to drive cloud adoption, combining people, processes, and tools. These services are continuously updated based on lessons learned and include:

- A core set of services to help clients transform applications and infrastructure for cloud.
- Common services such as solution design, architecture, and design thinking, leveraged as needed for client delivery.

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- Factory operations services to support delivery, including talent and skill management, capacity planning, and financial operations.

IBM Application development and Integration to Cloud and Containers with Red Hat Value from Build and Modernization

Cloud based application build and migration can modernize workflows, improve performance and reduce the workload for system administrators. If you're undecided about building and moving your applications to the cloud, consider these benefits.

Key Advantages of Cloud Adoption with IBM and Red Hat OpenShift

- **Agility** – Offer IT resources on demand, giving users and business groups what they need quickly without acquiring and deploying new hardware.
- **Scalability** – Avoid over-investing in equipment to anticipate usage spikes. Cloud providers bill only for the resources you use, enabling you to handle unexpected surges or seasonal demand efficiently.
- **Cost Control** – Gain visibility into how cloud costs are allocated and manage them effectively.
- **Cloud-Agnostic** – Building on Red Hat OpenShift allows you to remain cloud-agnostic, moving workloads to the most suitable cloud provider while maintaining the same capabilities in your own data centre.
- **Ease of Maintenance** – Eliminate time-consuming tasks like patching servers, pushing updates, and provisioning hardware. Free your IT administrators to focus on strategic projects while the cloud provider handles infrastructure maintenance.
- **Security** – Benefit from physical data centre security combined with advanced software security measures to safeguard your data. Maintain flexibility to manage security levels and choose from a variety of security options.

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About IBM
Supporting Government

We help government organisations in the UK and worldwide deliver and transform essential public services. Our teams are passionate and proud to support you in making a real difference in people's lives.

Government Services Supported by IBM

	Defence and Intelligence
	Public Safety and Policing
	Healthcare Life
	Sciences
	Tax and Revenue Management
	National Infrastructure
	Social Care
	Education Works & Pensions

The challenges we address for clients are complex and cannot be solved by technology alone. They require a partner who offers deep industry expertise and builds a relationship of trust

IBM combines the portfolio, people, and purpose needed to meet today's enterprise demands. Every day, we manage and deliver complex programs for government clients—where success has a wide-reaching impact on citizens and national services.

We provide access to industry experience, insight, and technology capabilities to deliver and operate secure, scalable, optimized, and highly available services for government.

We support you by bringing:

- Industry Expertise – Professionals who understand public services, apply innovation to business processes, and bring valuable industry insights
- Trust and Security – Protecting sensitive data and deploying new innovations responsibly
- Innovative Technology – Expertise in AI, blockchain, 5G, automation, IoT, cybersecurity, and quantum—delivered in a hybrid cloud environment
- Experienced Services Professionals – Supporting strategy, innovation, and transformation across processes, applications, and cloud infrastructure.
- Global Alliances – Strategic partnerships with the world's leading technology vendors.

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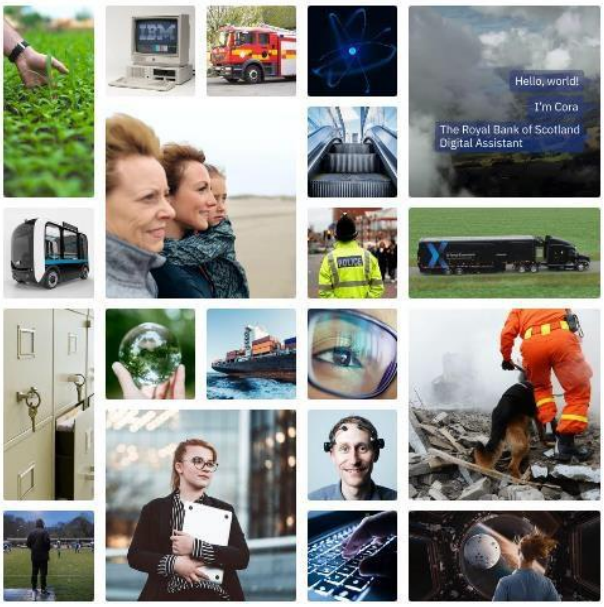
About IBM

This is IBM in the UK

We have worked together with organizations in the UK for over 100 years, with a rich history of joint innovation and achievements, built on trusted relationships.



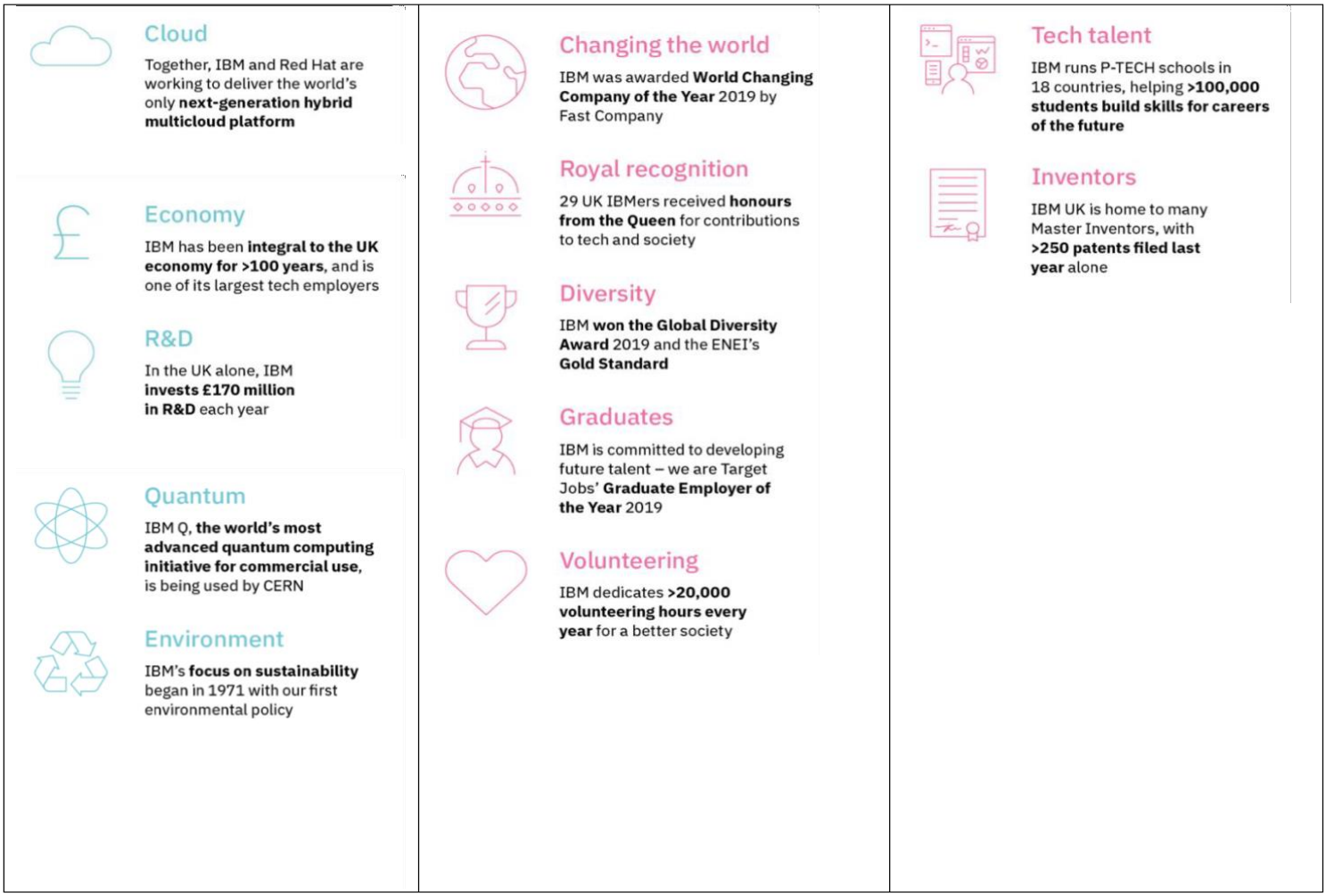


Figure 2: About IBM

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